NITE-TIMES NEWS

CHICAGO AREA TIMEX USERS GROUP

Chicago Area Timex Users Group — Downers Grove, Illinois
Volume 7, Number 5 — September/October 1993

MEMORY MAP

ROUTINES — *ADDRESS*

CATUG Club Officers 1
NITE-TIMES Information 2
Contributors to this Issue 2
Club Meetings 2
BUS STOP 2
Trea$ury Note$ 3
Secretary's NotePad 3
GATOR's Twisted Pair 4
Items for SALE through the Club 4
Special Deals and Buys 5
Articles:
MORE MINERAL OIL! 5
QL Challenges 6
QL Woes 8

C.A.T.U.G. CLUB OFFICERS

Here is the list of 1993 club officers and how to contact them. The club has two strong SIGS, SPECTRUM/TS2068 and QL. If you have questions about either of these fine machines, or even the ZX81/TS1000/TS1500, call one of the officers. C=312, S=708.

POSITION	NAME	PHONE	PRIMARY FUNCTION
President	Nazir Pashtoon	S439-1679	The buck stops here...
Vice-President	Steve Cooper	S968-3553	Meeting Planning, etc.
Secretary	Larry Sauter	C763-5383	Records and Reporting
Treasurer	Frank Mills	S544-1918	Dues and Purchasing
Editor	Bob Swoger	S576-8068	Newsletter, BBS, etc.

Copyright (C)1993 Chicago Area Timex Users Group, Streamwood, IL

Nite-Times Information

The Nite-Times News is the newsletter of the Chicago Area Timex Users Group. For an annual fee of $12.00 you can become a CATUG member and receive six newsletters each year. Write your check payable to:

FRANK MILLS
417 S 47th AVE
BELLWOOD IL 60104

The Chicago Area Timex Users Group is pleased to exchange newsletters with other Timex and Sinclair supporting user groups at no charge. Send all newsletter requests to:

CATUG EDITOR BOB SWOGER
613 PARKSIDE CIRCLE
STREAMWOOD IL 60107-1647

If you desire to reprint any articles that appear here, please provide credit to the author and this newsletter.

We encourage your user group to copy this newsletter and distribute it at your regular meetings to your members free of any charge as we believe that this will encourage better meeting attendance. If you are a user group that feels as we do, please let us know in your newsletter so that we might do this for our members and keep our attendance up.

Articles originating from our group may be downloaded from our BBS and reprinted.

CONTRIBUTORS TO THIS ISSUE

Bill Lawson
Frank Mills
Nazir Pashtoon
Larry Sauter
Bob Swoger, K9WVY

CLUB MEETINGS

The Chicago Area Timex Users Group meets on the THIRD Saturday of each month at the home of our meeting coordinator Steve Cooper in Downers Grove, Illinois from 1:00 to 5:00 PM. Steve's home is lovingly called the CLUB HOUSE and is located at 1300 Maple Street in Downers Grove just 2 blocks southwest of the Downers Grove Public Library. Steve should always be contacted evenings at 708/968-3553 to confirm the meeting schedule.

BUS STOP

Little Boy Blue
by Eugene Field

The little toy dog was covered with dust, But sturdy and staunch he stands; And the little toy solder is red with rust, And his musket molds in his hands.

Time was when the little toy dog was new, And the solder was passing fair; And that was the time when our Little Boy Blue Kissed them and put them there.

"Now don't you go till I come," he said, "And don't you make any noise!" So, toddling off to his trundle bed, He dreamt of his pretty toys; And while he was sleeping an angle song awakened our Little Boy Blue--- Oh! the years are many, the years are long, but the little toy friends are true!

Aye, faithful to Little Boy Blue they stand, Each in the same old place--- Awaiting the touch of a little hand, The smile of a little face; And they wonder, as waiting the long years through in the dust of that little chair, What has become of our Little Boy Blue Since he kissed them and put them there?

-:-

We are often told by family members that our Sinclair Machines are our favorite toys and our user group is, for each of us Sinclairists, a second family. Well, no TOY we have

ever had has given us so many years of un-interrupted pleasure and caused us to become acquainted with so many wonderful friends. Such a friend was our Secretary, **Jim Brezina**, who went to be with the LORD September 26, 1993. Articles he submitted to past issues of **The Nite-Times News** showed us all how much fun he had with his TS2068/Zebra disk drive system. We could always count on this blue-eyed, smiling CATUG member to be at all the meetings as well as the annual picnics.

We at CATUG shall miss Jim all the days of our lives!

TREA$URY NOTE$

The balance as of Oct. 30, 1993 is $351.73 Our current paid membership stands at 19.

Frank Mills, Treasurer
Chicago Area Timex Users Group

SECRETARY'S NotePad

September 18, 1993

Present were President Nazir Pashtoon, John Pagano, Steve Cooper, Abed Kahale, Larry Sauter, and Bob Swoger. The meeting opened with the second showing on Steve Coopers theater sized TV screen of the video made at the ISTUG Picnic showing the Z88 acquired by Paul Holmgren. See last month's **Nite-Times News** for the account.

Next came a report from Bob Swoger on the Dayton ComputerFest. He reported that more than 30 T/Sers had come to the Fest in which about 35000 people attended through out. There were bargains galore! Among those attending were Jon Kaczor, Steve Spalding, Keith Watson, Doug Gillespee, Neil Schultz, Bill Heberline, Frank and Carol Davis, Hugh Howie, Steve Taylor, DG Smith, Greg Newkirk, Gary Ganger, Paul Holmgren, Don Lambert, Tim Swensen, Dave Lassov, Mel LaVerne and Bob Swoger, just to name a few.

Gary Ganger's Sir Clive Museum was across from Don Lambert's T/SNUG table giving folks ZXir QLive Alive! newsletters as well as the past newsletters of all North American user groups. Bob Swoger of CATUG shared the table and was selling LogiCall for LarKen systems.

Frank and Carol Davis worked a very busy table. UPDATE! magazine was sold there, ISTUG was represented with Mechanical Affinity goodies of all kinds, hardware and software for ZX81/ TS1000, TS2068 and Spectrum, QL and even the latest, ZX88. A ZX88 was also there for sale.

Paul Holmgren was at the next table for QUANTA and ISTUG. More ZX81/TS1000, TS2068 and QL goodies. QL keyboard contact overlays were going for $12. A JLO Disk drive/EPROM burner/ Printer interface package was going for $150.

Bill Heberline and Neil Shultz manned the SMUG booth which was heavy with brand new books and software for both ZX81 and TS2068. I found books there I'd never seen before.

Tim Swenson and his wife provided a picnic for the 22 Sinclair users that showed up Saturday evening. With fewer people showing up on Sunday, there was more room to breath and the goodies were easier to find. There are always a few more bargains after noon on Sunday. Motel rooms in the area were still plentiful.

October 16, 1993

The meeting opened with a second showing of the ISTUG picnic video at 2:50 PM for the benefit of Treasurer Frank Mills who had missed the first showing. Those present were Frank Mills, Larry

Sauter, Steve Cooper, Bob Swoger, Nazir Pashtoon and Abed Kahale.

Bob Swoger brought a tape for Cooper's TS2068 using JLO disk operating system to try to rebuild the LogiCall ensemble modified for JLO systems. The accident of erasing the previous disk happened when Bob tried to format a disk in drive one only to find that disks can only be FORMATted in drive 0.

Ruth Fegly called to ask about our long over due newsletters. Bob told her that all six would be printed this year, that he had no articles and had experienced burn-out.

Hugh Howie asked us how many would come to a Toronto Sinclair Fest if one were held in the summer of 1994. Only one, possibly two would go that distance. Neil Schultz of SMUG said five of his group would go.

Bob is trying to collect RLE pictures for the TS2068. He has been getting pictures from a Macintosh and hopes to get some from Abed's MS-DOS machine. He hopes to create a NTN article with this effort. Our LOGO on the cover of NTN has long been an RLE given to us by Past President Gary Lessenberry. Our editor no longer cuts and pastes it on our cover page but instead, prints it out with the rest of the text using a laser printer rather that a dot matrix printer. We feel that the LOGO has a little less character now. It seemed to us that the old way gave us windows in the buildings!

Also, while scanning pictures with the MAC, he realized he can now scan the LKDOS manual and with character recognition software, be able to clean up Larry's manual.

Swoger reported that he solved the Kealy/Lambert mystery which explains how a Spectrum can be booted in a drive other than 0 or 4. Previously it was thought that the 'K' key had to be help down on power-up to switch to the Spectrum ROM in the DOCK port using AUTOSTART. He now has this feature in LogiCall. Abed put out a request for PD librarians for the Z88 and the QL. Donaldson is thought to be the best bet for our group, he will be asked at the next meeting. Nazir stated that we can't share PD libraries with other groups because we have nothing to share! We shall work on this problem.

The meeting adjourned at 3:20 PM.

Larry Sauter, Secretary
Chicago Area Timex Users Group

GATOR's TWISTED PAIR

! ! ! R E M E M B E R ! ! !
We have a 24 hour BBS and encourage you to exchange mail and contribute to the Download Section. Use it and have fun!

Call the BBS at 708-632-5558 and register. On your next call your security level will be increased to 5 on this RBBS and you will be able to have most privileges.

Bob Swoger, SYSOP
Chicago Area Timex Users Group

ITEMS FOR SALE THROUGH THE CLUB

It has come to our attention that some LarKen Users are using something less than Version 3 firmware. The club will supply updated EPROMs, SYSTEM DISKS, and MANUALS for just $5 which includes shipping and handling, free if ordered with LogiCall or Spectrum ROM.

If you are a LarKen LKDOS owner and would like a SPECTRUM V2 kit for your system we will supply an EPROM, socket and 74HCT32 for $12 which includes shipping and handling. The install instructions are in your LarKen manual. We shall not be responsible for your

install job. AERCO owners need only the SPECTRUM EPROM for $10

If you have a mismatch between you LarKen DOS EPROM and your Western Digital Controller chip, we will send you the correct one for free on behalf of our friends Rod Gowen of RMG and Larry Kenny of LarKen. You should be using L3 EPROMs with WD1770 controller chips or L3F EPROMs with WD1772 controller chips. Check it out! Call in requests to Bob Swoger at W708-576-8068 H708-837-7957

SPECIAL DEALS AND BUYS

NAP_Ware (Nazir A. Pashtoon's new endeavor) announces the availability of all Timex or QL PAL (Programmable Array Logic) chips. If interested, call him evenings on 708-439-1679.

LogiCall Integrated Software Ensemble easy operating system for LKDOS in both TS2068 and Spectrum modes includes LogiCall 5.0 TASWORD TWO V2.8, VU-CALC V1.6, VU-FILE and MTERM2 Drivers modified for LogiCall, DISKS.B1 TAPES.B1 steprt.B1 HEADER.BT (tape header reader by Nazir Pashtoon) FORMAT.B_ MOVE.BL and more all on 2 SSDD disks for $15. You must specify your LKDOS EPROM version. If you already have a copy you are encouraged to distribute copies to other LarKen LKDOS users for as you see by the price we are not in the business of making money on it, just making LarKen's LKDOS even better! Call in requests to Rod Gowen of RMG Enterprises or Frank Davis of Mechanical Affinity.

So you like to fly? The 747 Flight Simulator for Spectrum by Derek Ashton of DACC sold over 40K copies in EUROPE. Requires Spectrum Emulator. At this time supplied on LarKen SSDD disk only for $10 which goes to Derek Ashton, now working at MOTOROLA with Bob Swoger. Call in requests to Bob at W708-576-8068 H708-837-7957

ARTICLES

MORE MINERAL OIL!

by Bob Swoger

In past issues we have talked about the uses of mineral oil to keep ZX81/TS1000s from crashing, healing the TS2050 and DOS interface intermittent operation, RCA phono connector and sub-miniature phone jack noise problems as well as restoring printer ribbons.

Our church organist had enough with the strange sounds coming out of our Allen organ. Seems the more than 48 dual triodes had pretty dry pins. Placing a little mineral oil in a bowl, I removed the tubes and dipped the pins in the mineral oil, just enough to go half way up the pins, and plugged each tube back into the socket. Amazing just how easy they went back in as compared to the removal of each. Yep, quieted those beauties right up! Does the same thing for microphone connectors.

Tuner cleaner just doesn't do the job because after the cleaning, no lubricant is left behind so corrosion will set in, not so with mineral oil. Oxygen can't get to the metal any more so the electrical contact lasts for many years.

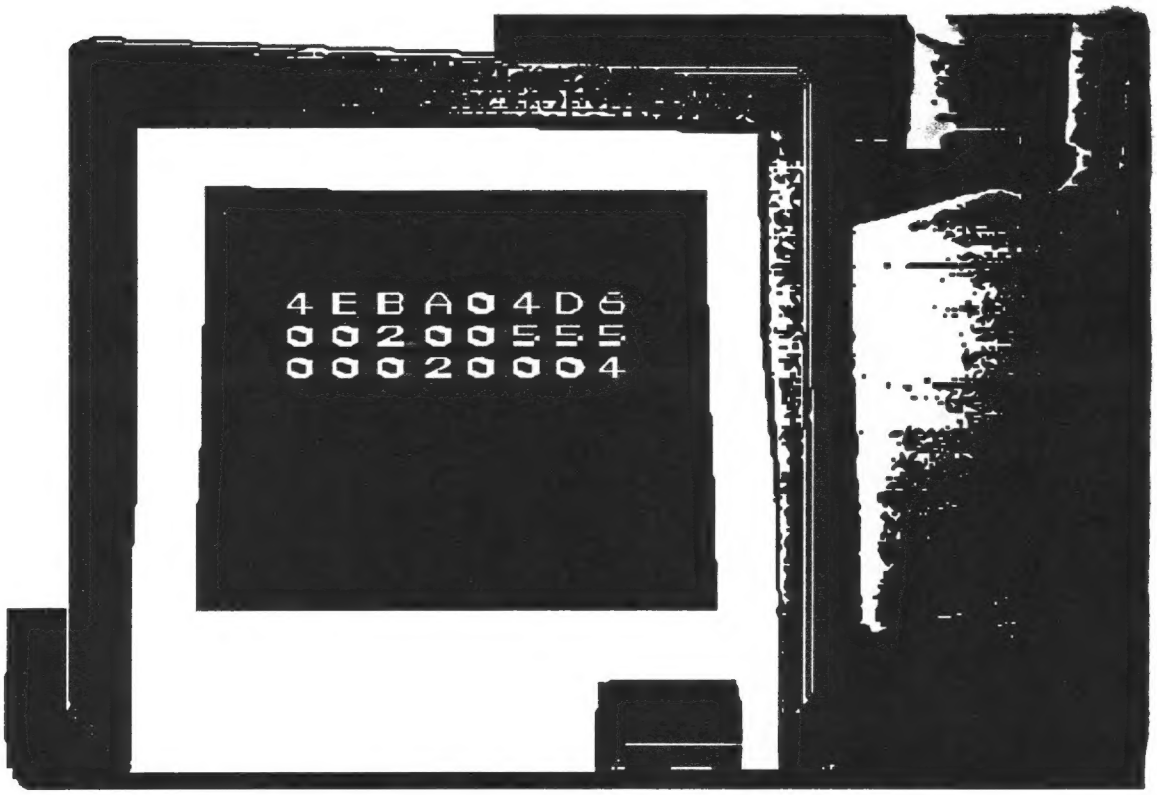
By the way, don't use tuner cleaner on potentiometers. There is some kind of lubricant on them that tuner cleaner removes making the pot forever noisy! There is, however, a pot cleaner available, ask for it.

If you are having trouble with ICs in IC sockets, clean them with tuner cleaner if you wish but put some mineral oil in a saucer and dip the IC pins into the mineral oil before inserting the IC into the socket. The IC will go in so much easier!

In responce to the article below reprinted from Nov.-Dec. '92 SINK-LINK, Nazir Pashtoon follows with the article "QL Woes".

QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL

My purpose in writing is to tell you about the problems '**CHALLENGES**' that seem to haunt my **QL**. I Believe that living on the 18th floor of 22 story building has a lot to do with it. For example, this attempt is the fourth and the one that has progressed most, in words typed and saved. Twice the cursor disappeared and the machine locked up. The third time, when reloading the program, I got a **READ/WRITE failed** message. I gave up and went for supper.



This photo was taken in June. I was working when all at once the monitor blinked. The start screen appeared followed by the window of large print, or should I say super letters/digits. The second photo (not shown) indicated that the information in the window was continually changing. I shut the equipment down rather than wait for the end. At least a month or two later, the screen displayed what I thought was '**CODE**' and shortly after resetting the machine, the same thing happened except this time it '**SCROLLED**' the code and I wondered if I had just seen the '**ROM**' go by. I've been moving stuff around and have made many saves as well as two printings and we're still going strong. Do you think it's the **BUILDING???**

QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL

Another challenge that occurs from time to time is **DOUBLE LISTINGS** in the DIRectory, the same name listed one below the other. I have been told that I must have placed an extra space, when saving, that does not show up in the listing. I have tried to put in extra spaces but I'm sure they are not included in the save. I have copied to another disk, deleted one of the names and one of the two remains, then tried to **DELETE** the other only to be advised **program does not exist!**

I have copied the disk, taken down the number of sectors used, deleted the file, **taken the numbers again** and found there is still something in memory even though a request to load is responded to with **program does not exist.**

Recently, my # 2 drive began to act up. It demonstrated this by listing approx. 7 files when I knew there were 69 files on the disk. I proved it by placing the disk in another drive and requested a DIR and got the result I was expecting. I learned from Louis Laferriere that the slides for the **head** probably need a polish. So, I shut the system down, unplugged the power supply, removed the drive from its case, removed two small groups of lead connectors and two screws. This allows the removal of the top board and exposes the head mechanism. By wrapping an inch wide strip of (soft) cloth around the guide rod, working the cloth up and down, you remove any build up of dust, etc. The head can be slid back and forth to allow you to get at most of the guide rods. Reassemble and test. My effort paid off immediately. One might get the idea that he knew what he was about.

On board this QL is a MINERVA ROM installed by George Chambers. For a long time after, when the screen that tells what is connected, i.e. care QJUMP TOOLKIT ver. 2.09 @ 1984 and under that, CUMANA DlSK Interface ver 1.14, which was repeated three times. Recently, I read one of Howard Clases' articles where he explained with MINERVA, upon power up, the checking system may pass by the particular spot and each time it would report and record. My apologies to Mr. Clase for the terminology and my thanks, as I often wondered why there were three printings. By the way, it doesn't happen now!

It is noted that my last 'CONTRIBUTION' to the newsletter appeared in the JUL/AUG 1989 issue, so I will take this opportunity to say thanks to all the other contributing members who help me learn more about **QL SuperBASIC** and to the **local club members** who make **computing** possible for me.

W K (Bill) Lawson From NOV/DEC 1992 SINC-LINK

Note: If you were to equip Bill Lawson's EPROM adapter for the QL with, say, a JS, JSU, JM, MGUK, or MGUS version of QDOS, you will not see the numbers on the screen that Bill describes. You will just have a crashing machine, or a machine which does not initialize properly. This phenomenon is different from the so called 'heating" machine. See the following article. NAP

QL Woes

by Nazir A. Pashtoon

~~~~~~~~~~~~ QL WOE 1 ~~~~~~~~~~~~

Bill Lawson article (Nov/Dec 92 Toronto's SINC-LINK) mentioned a myriad of symptoms of his malfunctioning QL system. I hope he has resolved and sorted out these problems. The symptoms he mentioned;

> Cursor disappears and machine locks up,
> READ/WRITE FAILED
> Double listing of DIRectories.
> Use DELETE, get PROGRAM DOES NOT EXIST.
> Windows changing constantly.
> Code? scrolls by.
> MINERVA ROM is on board,

and a few more, apply to approximately a dozen QLs in my user group (CATUG) and my own. These problems invariably surface when a daughter-board with Minerva or QDOS EPROM is installed in the QL. To solve these problems, proceed as follows:

A) All the important integrated circuits in the QL are socketed. Socketed computers from LISA to the first shipments of ATARI ST and other computers were plagued by unreliable operation. The same is true of the QL. Many times the microdrive problem and unreliable video blanking is directly traceable to the ZX8302 and ZX8301 chips. Note that these two ICs are CMOS, and static-sensitive, touch a grounded metal object with your fingers before you touch the ICs. When you open your QL, it is advisable to spray the pins and sockets of these ICs, as well as the pin rows and sockets of other ICs with a "tuner cleaner", such as Radio Shack #64-3320, or equivalent. After spraying, use a flat-bit screw driver, or a butter knife to displace the chip slightly upwards from both ends. Spray again, and press the integrated circuits back in place. This cleaning should suffice for at least a year.

B) As mentioned earlier, many users who had fully functional machines, started having problems when they installed a small EPROM daughter-board inside the QL. After carefully studying the problem in about a dozen cases, I concluded that the problem is caused by hairline cracks in the copper traces of the daughter board. How are these hairline cracks caused?

After watching our members, and my own practice of how I would install the daughter-board on the QL motherboard, it became obvious that we ourselves were the culprits. To explain, normally we would first install the daughter-board by pressing on the corners of the board, and then press-in the EPROM. Both the procedure as well as the order in which the task is performed are wrong. Why?

The daughter-boards we were using, are flimsily constructed from very thin copper traces (to keep costs down, this is true of all peripheral boards, and the QL motherboard). As the figure shows, two sockets are installed side-by-side, with approximately 0.2" spacing, one socket that is used for the EPROM is an ordinary dual-leaf socket, and the other one is a machined socket. The pins of the machined socket protrude, and is fitted in the ROM socket on the QL mother-board. In order to install two sockets side-by-side one has to saw-off the socket stabilizing bridges (two or three). The consequence of this is that when you want to install an EPROM in the normal socket, it flexes the socket rows sideways so much that some times it is not possible to install the EPROM. This flexing causes the hairline cracks in the copper traces on the back of the daughter-board. Belatedly, one discovers that in order to install the EPROM, one has to hold the two rows of the socket pins of the normal socket vertically by one hand, and then fit the EPROM in the socket. We discover this after we have already caused damage to probably more than one trace.

The second mechanism causing the cracks, is the way we normally install the flimsily made daughter-board, by pushing on the corners of the board. This method of installation causes too much pressure on the corner pins of the machined socket, and possible hairline cracks. As such, the suggested procedure for installation is to:

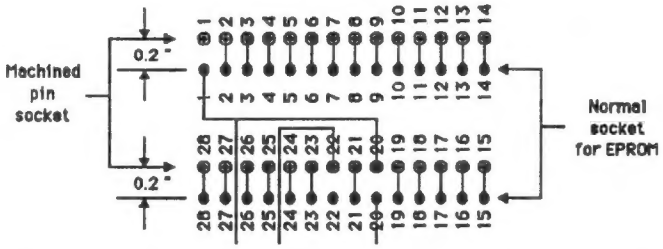
• First install the EPROM on the daughter-board, while holding the normal socket in a vertical position with one hand, thus avoiding the
~~~~~~~~~~~~

flexing of the pins of the normal socket.

• Second, install the daughter-board on the motherboard by pressing on TOP of the EPROM, thus causing the pressure to be equally distributed on all the pins of the machined socket.

All these hassles could have been avoided if the boards were properly manufactured. For example, metalization both on top and bottom of the daughter-board would have helped. Most importantly, instead of using a low cost machined socket, the use of DIP socket carrier (say Digi-Key #ED6028, $3.26) would have totally solved the problem. In this case you will have the benefit of machined pins, with pins flush on top, thus allowing the normal socket to straddle the socket carrier pins on top, without having to saw off the stabilizing plastic bridges.

The hairline cracks that I mentioned are hard to see even under a magnifying glass. Static testing by continuity measurements (using a VOM) could also be misleading. One can dynamically test by say, using a logic probe. One may even be tempted to cure the problem by putting solder globs on the affected traces. I recommend against it. The only sure method of solving the problem is, to do point-by-point wiring between the pins of the two sockets. This is much easier than it sounds. As shown in



Back view of the daughter-board.
The decoder IC is
a 74HCT00 on my board.

the figure, the two sockets are separated by a distance of 0.2", with all the respective pins connected by copper traces, except pins 1, 20, and 22. I use bare wrapping (28 gauge) wire. Make a tiny hook on one end of the wire, solder it to the pin, wrap the wire on the corresponding pin of the other socket for half a loop, solder and cut the wire with a razor blade or X-ACTO knife at the base of the pin. Do all the 25 pins shown in the diagram. This will, with high probability, solve your problem. In the worst case you may have to duplicate all the traces on the back of the daughter-board using wire-wrap wire. Do not use a soldering iron rated higher than 15 watts.

C) A third source of the cracks, is the protrusion of the daughter-board on top of the QL mother-board, and the pressure applied by the back of the keyboard. On the Samsung QLs, there is a screw on the back of the keyboard, which interferes with the top of the new EPROM that you install. One must remove this screw. Even the removal of this screw does not solve the problem, always. It is suggested that of the eight screws holding the keyboard and the base of the QL together, two screws, one in back and one in front, not to be installed. These are the screws which are left of center, roughly in alignment with the ROM sockets. It is worth mentioning, that depending on the height of the daughter-board, even the mother-board can be flexed by the pressure exerted through the daughter-board from the keyboard.

~~~~~~~~~~~~ QL WOE 2 ~~~~~~~~~~~~

In the Mar/Apr 93 issue of Sink-Link, an article "Notes On QL Lock-Ups" by Hugh Howie, and I quote; *"I know of one person who has four QLs and is only now starting to have some success with one of them. Power Surges?"* Some QLs have exhibited this problem since its introduction into the market place. I have analyzed the problem, and believe I have a low cost solution. I suggest that people facing this so called HEATING problem, send me $2.00 cash, for the cost of a device, jiffy-bag, and mailing by return mail.

PS. After the above article was published, I received the Mark I version of Minerva 1.97. The daughter-board carrying a 1990 Copyright, is the best I have ever seen (in the QL market). It addresses all my objections. It has metalization on top and bottom with machine inserted metal eyelets connecting the top and bottom traces, with ground planes. Best yet, they have used only one machined socket for both the EPROM and the connection to the mother-board.

Nazir Pashtoon
940 Beau Dr. Apt. 204
Des Plaines, IL 60016-5876

THE CHICAGO AREA TIMEX USERS GROUP
MEETS AT 1:00 PM ON THE SECOND SATURDAY
OF EVERY MONTH AT 1300 MAPLE STREET IN
DOWNERS GROVE, ILLINOIS SOUTHWEST OF
THE PUBLIC LIBRARY.

CHICAGO AREA TIMEX USERS GROUP
613 PARKSIDE CIRCLE
STREAMWOOD, ILLINOIS 60107